

Study Guide Density, Planetary Differentiation, Mantle Convection and Continental Drift

1. What is density?
 - a. Definition
 - b. Calculating
2. How do we differentiate between Density and Weight?
3. Influence of Temperature and Pressure on Density.
4. Density and the Periodic Table
5. Water
 - a. What is the density of water?
 - b. Why does ice float on water?
6. Conduction
7. Convection
8. Radiation
9. Formation of the Earth
 - a. Age of our planet
 - b. Age of the moon
 - c. What is the “Late Heavy Bombardment”?
10. Planetary Differentiation
 - a. How is the Earth like an onion or an apple?
 - b. What are the two factors that influence how these layers behave?
11. What are the layers of the Earth?
 - a. Crust
 - i. Continental – Composition, characteristics and properties
 - ii. Oceanic – Composition, characteristics and properties
 - b. Mantle – Composition, characteristics and properties
 - c. Outer Core – Composition, characteristics and properties
 - d. Inner Core – Composition, characteristics and properties
12. Describe in GREAT detail what happens during Mantle Convection.
13. Why is mantle convection critical to keeping our planet habitable?
14. What would happen if the core cools and mantle convection stops?
15. What is continental drift?
 - a. What was Alfred Wegner’s hypothesis
 - b. Evidence to support continental drift
 - i. Puzzle-like shape of continents
 - ii. Mountain ranges in Africa and South America
 - iii. Fossils
 - iv. Continents had far different climates in the past